

Historic, Archive Document

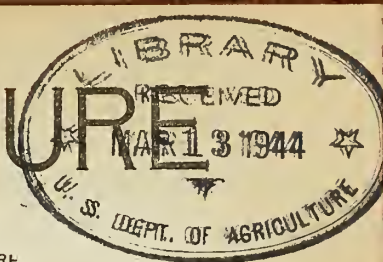
Do not assume content reflects current
scientific knowledge, policies, or practices.

73301
RESERVE

COTTON LITERATURE

SELECTED REFERENCES

PREPARED IN THE LIBRARY OF THE UNITED STATES DEPARTMENT OF AGRICULTURE
WITH THE COOPERATION OF THE BUREAU OF AGRICULTURAL ECONOMICS,
BUREAU OF PLANT INDUSTRY AND BUREAU OF ENTOMOLOGY.



COMPILED BY EMILY L. DAY, LIBRARY SPECIALIST IN COTTON MARKETING,
BUREAU OF AGRICULTURAL ECONOMICS, WASHINGTON, D. C.

Vol. 3

December, 1933

No. 12

CONTENTS

Production.....	329
General.....	329
Botany.....	329
Agronomy.....	330
Diseases.....	333
Insects.....	333
Farm Management.....	335
Farm Engineering.....	335
Production Credit.....	336
Farm Social Problems.....	336
Cooperation in Production.....	336
Preparation.....	337
Ginning.....	337
Baling.....	337
Marketing.....	337
General.....	337
Demand and Competition.....	338
Supply and Movement.....	343
Prices.....	345
Marketing and Handling Methods and Practices.....	347
Services and Facilities.....	347
Cooperation in Marketing.....	347
Utilization.....	347
Fiber, Yarn, and Fabric Quality.....	347
Technology of Manufacture.....	357
Technology of Consumption.....	358
Seed and Seed Products.....	359
Legislation, Regulation, and Adjudication.....	362
Miscellaneous--General.....	363

COTTON LITERATURE is compiled mainly from material received in the Library of the U. S. Department of Agriculture.

Copies of the publications listed herein can not be supplied by the Department except in the case of publications expressly designated as issued by the U. S. Department of Agriculture. Books, pamphlets, and periodicals mentioned may ordinarily be obtained from their respective publishers or from the Secretary of the issuing organization. Many of them are available for consultation in public or other libraries.

PRODUCTIONGeneral

Australia. Council for scientific and industrial research. Register of agricultural research in progress in Australia, 1933. 239p. mimeogr. 1933.

Disease survey, p.112; insects, p.147-148.

Indore. Institute of plant industry. Progress report for the year ending 30th June 1933. 20 p. Bombay, Examiner press, 1933.

Describes research work on cotton varieties, culture, and diseases.

Botany

Horlacher, W. R., and Killough, D. T. Progressive mutations induced in *Gossypium hirsutum* by radiations. Amer. Nat. 67 (713): 532-538. Nov./Dec. 1933. (Published at Salem, Mass.)

Contribution from Texas Agricultural Experiment Station, paper no.219, Technical Series.

Literature cited: p.538.

Jaganatha Rao, C. A note on the occurrence of small outgrowths on the calyx ring of the cotton flower. Madras Agr. Jour. 21 (9): 394, illus. Sept. 1933. (Published by M. A. S. Union, Agricultural College and Research Institute, Coimbatore, India)

Moore, C. N., and Haskins, C. P. Physiological variations in certain crop plants following seed exposure to high-voltage X-rays. Bot. Gaz. 94 (4): 801-807, illus. June 1933. (Published at University of Chicago Press, Chicago, Ill.)

"The results make it probable that abnormal mitoses, correlated with considerable genetic changes, are involved. Cotton, tung oil, snapdragon, phlox and sour orange were used." - Chem. Abs. 27 (15): 3739. Aug. 10, 1933.

Smith, E. H. G., Voelcker, O. J., and West, J. Plant breeding in Southern Nigeria. Trop. Agr. [Trinidad] 10 (11): 312-317, illus. Nov. 1933. (Published by the Imperial College of Tropical Agriculture,

Trinidad, B. W. I.)
Cotton, p.315.

Agronomy

Bijhouwer, A. P. C. Cotton cultivation. Landbouw 9 (3): 112-132. Sept. 1933. (Published by Secretaris-Penningmeester der Redactie en Administratie van Landbouw, Buitenzorg, Java)
In Dutch. English summary, p.132.

Derevitskii, N. F. The investigation of the accuracy of comparing means in the experiment with a scattered situation of replications. Bul. Appl. Bot., Genetics and Plant-Breeding (Ser. 2, Genetics, Plant Breeding and Cytology) (3): 171-187. 1932. (Published at Leningrad, U. S. S. R.)

English translation. In Russian, p. 139-170.

"The paper describes the methods of statistical analysis suited to the working out of trials consisting of a number of varieties arranged with replication in long narrow strips. The method is that familiar under the name 'randomized blocks', except that the varieties are not randomized. The author goes on to show that variation within the block due to a soil gradient may in many cases be allowed for by a modification of the analysis, in which regression coefficients are calculated for each block, and the deviation of the actual from the calculated yield is used to furnish a basis for experimental error. The mathematics of the least square solution is described." - Empire Cotton Growing Rev. 10 (4): 322-323. Oct. 1933.

Experiments with cotton varieties are used as illustration.

Hodge, Lloyd. The use of delinted cotton seed for planting purposes. Queensland Agr. Jour. 40 (1): 37-39, illus., tables. July 1, 1933. (Published by Department of Agriculture and Stock, Queensland)

"It would appear from the experience gained during the past two or three seasons, and from investigations conducted at the Cotton Research Station at Biloela, that the use of delinted cotton seed for planting purposes ensures quicker germinations, more even distribution of seed, and better ultimate stands than are obtained from planting undelinted seed."

Howard, Albert. The periodic failure of American cotton in the Punjab. Empire Cotton Growing Rev. 10 (4): 268-272. Oct. 1933. (Published by P. S.

King and Son, Ltd., 14, Great Smith St., London, S. W. 1, England)

"The object of this paper is to provoke and also to suggest that the Punjab cotton problem should be examined afresh. The root-system of the crop should be carefully considered in relation to the soil solution and to the general alkali problem of the alluvial soils of North-West India."

India. Burma. Department of agriculture. Report for the year ended the 31st March 1933. 59p., illus. 1933.

Brief information on cotton experiments, p.13-14.

India. Indian central cotton committee. Hyderabad quest for better Gaorani cotton. Indian Trade Jour. 111 (1424): 7-8. Oct. 5, 1933. (Published by Department of Commercial Intelligence and Statistics, Calcutta, India)

Mehra, R. D. Improving the Indian cottons. Hyderabad quest for better Gaorani by seed selection. Textile Weekly 12 (294): 195-196, tables. Oct. 20, 1933. (Published at 49 Deansgate, Manchester, England)

"A scheme to study this variety [Gaorani] and to evolve a strain which will not only have the spinning qualities associated with Gaorani, but will also possess other suitable economic characters of good yield and ginning outturn of the short-stapled varieties, was sanctioned in 1929 by the Indian Central Cotton Committee for a period of five years at a recurring cost of over Rs. 26,000." The progress of this scheme is reported.

Morocco. Direction générale de l'agriculture, du commerce et de la colonisation. Expérimentation agricole, 1931-32. Rapport annuel. 148p. Casablanca, 1933.

Fertilizer experiments on cotton, p.29-32, 46-51, 146-147.

Recent research on Empire products. A record of work conducted by Government technical departments overseas. Bul. Imp. Inst. [London] 31 (3): 397-421. 1933. (Published by John Murray, Albermarle St., W., London, England)

Cotton yields and breeding, p.418-421.

Shabetai, C. R. Le traitement des graines de coton et de blé, par le chloropicrine.

Annales des Epiphyties 18 (6): 398-413. Nov.-Dec., 1932. (Published by Institut des Recherches Agronomiques, Ministère de l'Agriculture, Paris, France)

Treatment of cotton and wheat seed with chloropicrine.

Tidmore, J. W., and Williamson, J. T. Experiments with nitrogenous fertilizers and limestone. Amer. Fert. 79 (11): 6-8, 24, 26-27. Nov. 18, 1933. (Published by Ware Brothers Co., 1330 Vine St., Philadelphia, Pa.)

Fertilizer experiments on cotton.

Views from an outdoor laboratory. Fert. Rev. 8 (3): 11, illus. July/Sept. 1933. (Published by National Fertilizer Association, Washington, D. C.)

Fertilizer effects on cotton.

Wells, W. G. Importance of subsoil moisture in cotton-growing. Queensland Agr. Jour. 39 (5): 213-218, charts. May 1, 1933. (Published by Department of Agriculture and Stock, Brisbane, Queensland)

"The rooting system of the cotton plant is of the tap-root type, and therefore removes considerable moisture from the subsoils. It follows, therefore, that where cotton is grown on the same land for several years in succession, a good replenishment of subsoil moisture is required each season, either prior to planting the crop or during the early period of growth before sufficient bolls and squares are developed to cause much stress to the plant during dry periods or heat waves."

Yates, F. The analysis of replicated experiments when the field results are incomplete. Empire Jour. Expt. Agr. 1 (2): 129-142, tables. July 1933. (Published at the Oxford University Press, Amen House, Warwick Square, London, E. C. 4, England)

"Summary.--The procedure introduced by Miss Allan and Dr. Wishart for supplying a missing value in a table of experimental results, such as the plot yields of a field trial, so that the treatment means form unbiased and efficient estimates of the treatment effects, is here extended to enable any number of missing values to be replaced, it being shown that the method of derivation adopted previously is equivalent to the simpler method of minimizing the error term in the ordinary analysis of variance. The solution of a complex example is effected by iterative methods...The use of the missing-plot technique for further analysing interactions, whose significance is believed to be due to a few anomalous values,

is illustrated by the analysis of a set of varietal trials on cotton." - Empire Cotton Growing Rev. 10 (4): 323. Oct. 1933.

Diseases

Barduzzi, T. B. Une nouvelle methode pour la determination rapide des individus attaques par le wilt du cotonnier: la "methode de la feuille" ou "cotton wilt leaf index." Agriculture et Elevage au Congo Belge 7 (12): 163-164. Nov. 1933. (Published at 34, Rue de Stassart, Bruxelles, Belgium)

A new method for the rapid determination of individuals attacked by cotton wilt: the "method of the leaves" or "cotton wilt leaf index."

Metalnikov, S. S., fils. Action des rayons solaires sur les spores de bactéries pathogènes pour les insectes. Paris. Société de Biologie. Comptes Rendus 112 (16): 1666-1669. 1933. (Published by Masson et Cie, 120, Boulevard Saint-Germain (6), France)

"The dry spores of bacteria pathogenic to Pyrausta nubilalis, Hb., preserve their vitality for months, if not years. Experiments were conducted in Egypt to test whether dry spores remained pathogenic to Platyedra gossypiella, Saund., after long exposure to strong sunlight...The results of the shorter exposures to sunlight showed that the reduction in the pathogenicity of the bacteria was progressive, but so long as the spores remain dry, it is obviously very slow." - Empire Cotton Growing Rev. 10 (4): 332-333. Oct. 1933.

Rea, H. E. The effect of tillage on eradication of cotton root rot. Amer. Soc. Agron. Jour. 25 (11): 764-771. Nov. 1933. (Published at Geneva, N. Y.)

Contribution from Division of Agronomy, Texas Agricultural Experiment Station, College Station, Tex., Technical Series Paper no. 245.

Literature cited: p. 771.

Insects

Altson, A. M. The effects of absence of humidity on the eggs of Dysdercus spp. in the field. Ent. Mo. Mag. 69 (827): 83-85. Apr. 1933. (Published by Nathaniel Lloyd and Co., Ltd., Burrell Street Works, Blackfriars, London, S. C. 1, England)

The writer found that some of the eggs of these "Red Cotton Bugs" shriveled from lack of moisture in the soil, preventing further development.

DeLong, D. M. Three species of *Empoasca* leafhoppers known to affect economic plants in Haiti (including the description of two new species) Jour. Dept. Agr. Puerto Rico 16 (2): 113-115, illus. Apr. 1932. (Published by Insular Experiment Station, Rio Piedras, P. R.)

"Descriptions are given of *Empoasca fabalis*, DeLong, *E. gossypii* sp. n., from cotton, and *E. canavalia* sp. n. from *Canavalia ensiformis*, in Haiti." - Empire Cotton Growing Rev. 10 (4): 327. Oct. 1933.

Egypt. Ministry of agriculture. Report on the work of the plant protection section during the period 1925-1931. 49p. illus. Cairo, Government press, 1933.

Boll-worm attacking green bolls, 1928, p.11.

Gaines, J. C. Trap collections of insects in cotton in 1932. Bull. Brooklyn Ent. Soc. 28 (2): 47-53. Apr. 1933. (Published at 38 DeKalb Ave., White Plains, N. Y.)

"In Texas in 1932 insect injury to cotton occurred throughout the whole season. Early in the spring the seedlings were attacked by thrips, and in June and July Rhynchota--of which *Psallus seriatus*, Reut., and *Adelphocoris rapidus*, Say, were the most important--became abundant, causing an excessive shedding of squares. *Heliothis obsoleta*, F., and *Alabama argillacea*, Hb., attacked both the fruit and foliage during July and August, and *Anthonomus grandis*, Boh., which was numerous in early September, infested practically all the squares. A list is given of 199 species representing 61 families, of insects trapped in a cotton field during the period from mid-June to the end of August." - Empire Cotton Growing Rev. 10 (4): 326. Oct. 1933.

Pearson, E. O. Notes on the genus *Dysdercus* (Hemiptera-Heteroptera) in Trinidad, B. W. I. Psyche 39 (4): 113-126, illus. Dec. 1932. (Published by Cambridge Entomological Club, Museum of Comparative Zoology, Cambridge, Mass.)

"Descriptions are given of the four species of *Dysdercus* (cotton stainers) found in Trinidad, with notes on their distribution and synonymy." - Empire Cotton Growing Rev. 10 (4): 327. Oct. 1933.

Smith, A. J. Report on cotton insects and disease investigations, Part 3. Notes on the red boll-worm (*Diparopsis castanea* Hampson) of cotton in

South Africa. South Africa. Dept. of Agr. Sci.
Bul. 114, 29p., illus. Pretoria, 1933.

Wall, R. E. A study of color and color-variation in
Aphis gossypii Glover. Ann. Ent. Soc. Amer. 26 (3):
425-463, illus. Sept. 1933. (Published by the
Entomological Society of America, Columbus, Ohio)
Literature cited: p.459-460.

A thesis submitted to the Faculty of the Grad-
uate School of the University of Minnesota.....
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy.

Williams, C. B. The bollworms of cotton. Empire
Cotton Growing Rev. 10 (4): 273-281. Oct. 1933.
(Published by P.S. King and Son, Ltd., 14, Great
Smith St., London, S.W.1, England)

Farm Management

Parnell, F. R. Good picking. Empire Cotton Grow-
ing Rev. 10 (4): 282-285, table. Oct. 1933. (Pub-
lished by P. S. King and Son, Ltd., 14, Great Smith
St., London, S. W. 1, England)

Prices paid cotton pickers in Transvaal and
records of individual pickers are given.

Richardson, T. C. Systematic rotations must come.
Cotton and wheat farmers will win by better farm
practices. Farm and Ranch 52 (21): 1, 10. Nov. 1,
1933. (Published at Dallas, Tex.)

Sample rotations are given. Data on cotton
yields in Texas are given to show that soils are
being depleted.

Thomas, F. L. Destruction of cotton stalks urged.
Either plow stalks under or graze them off as a
weevil control measure. Acco Press 11 (11): 5.
Nov. 1933. (Published by Anderson, Clayton and
Co., Houston, Tex.)

Farm Engineering

Biehl, M. Lenkung des technischen fortschritts.
Wirtschaftsdienst 18 (29): 992-994. July 21,
1933. (Published at 19 Fernruf, Hamburg 36, Ger-
many)

Direction of technical progress.

"The author discusses the effect on the labour
market of the introduction of new mechanical labour-
saving devices. The patenting of a new mechanical
cotton picker has been refused in the United States
owing to the enormous number of negroes it might
throw out of work."-Jour. Textile Inst. 24 (10)

A538. Oct. 1933.

(There is no truth in the statement that the patenting of any machine has been refused for the reason that it would throw people out of work. There is no authority under the law for such a refusal, according to a statement from the U. S. Patent Office. - Editor's note)

Production Credit

Vygodskii, S. L. Sel'skokhoziaistvennyi kredit v dorevoliutsionnoi Rossii. Oput ekonomicheskogo analiza finsirovaniia khlopkovodstva, l'novodstva i sveklovodstva, pod redaktsiei A. I. Gaistera. 242p. [Moskva] Gosudarstvennoe izdatel'stvo sel'skokhoziaistvennoi i kolkhozno-kooperativnoi literatury, 1931.

At head of title: Kommunisticheskaia akademiia. Agrarnyi institut...

Agricultural credit in pre-revolutionary Russia. Investigations in the economic analysis of the finance of cotton, flax and sugar-beets.

Farm Social Problems

Cotton strike ended by order of California authorities, after rioting results in several deaths--Wage scale of 75 cents per 100 pounds proclaimed--State and federal governments cooperate to terminate dispute. Com. and Financ. Chron. 137 (3567): 3213. Nov. 4, 1933. (Published by William B. Dana Co., William cor. Spruce Sts., New York, N. Y.)

Melkich, Alexander. Stand und aussichten des baumwollbaus in der Sovet-Union. 109p., maps. Berlin, P. Parey, 1933. (Germany. Reichsministerium für ernährung und landwirtschaft. Bericht über landwirtschaft...n.f. 82 sonderheft)

Condition and outlook of cotton planters in the Soviet Union.

Cooperation in Production

Hite, J. E. Community production and distribution of cotton planting seed in a one-variety cotton community. U. S. Dept. Agr. Circ. 286, 16p., tables. Washington, D. C. 1933.

India. United Provinces. Dept. of agriculture. Report on cotton purchase operations 1929-30 and 1930-31. 48p., tables. Allahabad, The Superintendent, Govt. press, United Provinces, 1931.

"The marketing operations recorded in this re-

port are part of an experiment undertaken to find out if compact blocks of cotton can be grown to provide improved fibre for the spinning mills of the province, on the lines of single variety community cotton growing, used to establish improved cotton in the United States."

PREPARATION

Ginning

Olsen, N. A. American cotton. Cotton ginning investigations of the United States Department of agriculture. Cotton [Manchester] 39 (1887): 25. Oct. 14, 1933. (Published at Ship Canal House, King St., Manchester 2, England)

To be continued.

Peek, H. M. Pima ginning. Official advices indicate need of better picking and less cleaning. Ariz. Prod. 12 (10): 5. Aug. 1, 1933. (Published at Phoenix, Ariz.)

Quotes from letter from the Bureau of Agricultural Economics, U. S. Dept. of Agriculture, regarding effect of poor preparation of Pima cotton on grade.

Baling

The "Bijoli" baling press. Engineering [London] 136 (3527): 179. illus. Aug. 18, 1933. (Published by Arthur Ernest Maw, 35 & 36, Bedford St., Covent Garden, Middlesex, England)

"A description...of a mechanical press which can be operated from any convenient source of power. It has been employed for bagasse, cork waste, cotton, esparto grass, peat, waste paper, etc." - Jour. Textile Inst. 24 (9): A435. Sept. 1933.

Favorable report on new open weave sisal bagging. Cotton Ginners Jour. 5 (2): 12. Nov. 1933. (Published at 109 North Race St., Dallas, Tex.)

Commissioners of Agriculture of South Carolina and Texas are quoted as to results of their investigations of the subject.

MARKETING

General

Annual cotton handbook for daily cable records of American, East Indian and Egyptian crops, together with Liverpool, Brazilian, continental,

&c., statistics; containing much useful and reliable information for the cotton trade. Season 1933-34. 345p., tables. London, Comtelburo, ltd., 1933.

[Cannon, C. A.] President Cannon reports work of cotton committee. Textile Bul. 45 (12): 3-4, 27. Nov. 23, 1933. (Published by Clark Publishing Co., 118 West Fourth St., Charlotte, N. C.)

Report made to the annual meeting of the North Carolina Cotton Manufacturers' Association, Nov. 17, 1933, Pinehurst, N. C. Extracts from the report of the committee attending the Fifth International Universal Cotton Standards Conference at Washington are included. The author criticises the present staple standards.

Fooshe, G. W. American cotton in 1932-33. Some lost ground regained. Manchester Guardian Com. (Sup., World Textiles with a Review of American Cotton): 5-6. Oct. 7, 1933. (Published at the Guardian Building, Manchester, England)
Annual review of the cotton trade.

Demand and Competition

Anglo-Finnish trade agreement. Benefits for Lancashire textiles. Manchester Chamber of Com. Mo. Rec. 44 (10): 301. Oct. 31, 1933. (Published by J. E. Cornish, Ltd., 1, Ridgefield, King St., Manchester, England)

Best, Ethel L. Maximum standards of work. Practicability of setting standards in cotton mills operating stretch-out system-- Factors involved in determining looms per weaver and sides per spinner. Amer. Wool. and Cotton Rptr. 47 (46): 11-12. Nov. 16, 1933. (Published at 530 Atlantic Ave., Boston, Mass.)

Memorandum compiled in the Woman's Bureau of the United States Department of Labor.

The information included "was obtained from statements of 2 engineers, 1 research organization, 1 textile labor leader, and 1 cotton-mill owner, together with facts obtained by the Woman's Bureau."

British India. A market review, with British prospects good. Textile Weekly 12 (296): 247-248. tables. Nov. 3, 1933. (Published at 49 Deansgate, Manchester, England)

To be continued.

Review of the year 1932-33, based on report by Sir Thomas Ainscough to Dept. of Overseas

Trade (Gt. Britain) and report of the Bombay Mill-owners' Association for 1932-33.

The centralized control over the cotton trade. The People's Tribune 5 (6): 305-306. Oct. 16, 1933. (Published at Shanghai, China.)

"Inaugural Manifesto issued by the National Economic Council on October 4, 1933."

"The aim of the Committee for Centralized Control over the Cotton Trade is, of course, to Centralize control and make systematic plans for the improvement of the Cotton market. Measures for coping with the situation will henceforth be devised and enforced by this Committee, with the powers of the Government, with a view to rehabilitating and improving the Chinese Cotton market."

China as a new market. Government extending textile industry. Textile Weekly 12 (295): 219, tables. Oct. 27, 1933. (Published at 49 Deansgate, Manchester, England)

"With the appointment of Mr. Harold Briggs, formerly general manager of the Belgrave Mills, Oldham, as technical adviser to the Government of Canton, South China, the first steps towards the industrialization of a great new country have been taken...At this stage, the aim of the Chinese is to meet Japanese competition, but as Mr. T. D. Barlow recently warned Lancashire in a memorable speech, competition from China in the future (he said in five years) will probably be the fiercest she will encounter from any source." Tables give trade with China in cotton and cotton yarn.

China's cotton commission. Will be charged with task of selling U. S. product and improving China cotton industry. Insp. and Com. Jour. 4 (9): 17. Sept. 1933. (Published by Shanghai Bureau of Inspection and Testing of Commercial Commodities, 15 Museum Road, Shanghai, China)

Cotton trade watches developments in Orient. Cotton and Cotton Oil News 34 (46): 9. Nov. 18, 1933. (Published at 3116-18 Commerce St., Dallas, Tex.)

Describes recent developments in China, India and Japan.

Egypt to have its own Lancashire. Machinery bought for mammoth mill. Manchester Guardian Com. 27 (694): 285. Oct. 7, 1933. (Published at the Guardian Building, Manchester, England)

"Work is now in progress to build in Cairo what

may prove to be the world's largest cotton spinning and manufacturing plant...The Egyptian Misr concern, which has vast cotton growing, ginning and exporting, spinning, weaving, and printing, as well as silk and linen interests, in Egypt, and which, in addition, controls a papermaking plant, a bank, and a transport and navigation company in that country, is the power behind the new venture."

Gt. Britain. Dept. of overseas trade. Conditions and prospects of United Kingdom trade in India 1932-1933. Report by Sir Thomas M. Ainscough. 240p., tables. London, H. M. Stationery off., 1933.

Inquiry into the Indian cotton mill industry: p.113-114.--Emergency inquiry regarding the grant of additional protection to the cotton textile industry: p.114-117.--Raw cotton: p.141-143. Compares the estimates of the total outturn of cotton in India for the last two years with the sum of exports and internal consumption."

[Gt. Britain. Ministry of labour] Cotton weaving wages. Figures of wages for cotton weaving, including the six-loom system, are given...together with data showing the extent of non-compliance with the agreed list. Textile Manfr. 59 (706): 389. Oct. 1933. (Published by Emmott and Co., Ltd., 31 King St. West, Manchester 3, England)

The Indian cotton agreement. Textile Weekly 12 (296): 251. Nov. 3, 1933. (Published at 49 Deansgate, Manchester, England)

Report of agreement reached by the British delegation and the Indian millowners at the conference at Simla, India.

Is public awakening coming? Recent utterances on world markets and trade barriers may be first murmurs of approaching storm or merely cries in the wilderness. We shall keep hammering away. Tex. Weekly 9 (44): 4-6. Nov. 4, 1933. (Published by Peter Molyneaux, 2500 McKinney Ave., Dallas, Tex.)

Discusses the cotton export situation, stating that "the fact is that the British buyer would pay slightly less for his thousand bales this year than last. And yet the transaction would show an increase of 53 percent, expressed in dollars."

Lancashire presents her case on India reforms. Long-awaited evidence now made public. Textile Weekly 12 (297): 277. Nov. 10, 1933. (Published at 49 Deansgate, Manchester, England)

Extracts from evidence collected by the Man-

chester Chamber of Commerce, with the collaboration and support of the Cotton Spinners' and Manufacturers' Association, and the Federation of Master Cotton Spinners' Associations and submitted to the Parliamentary Joint Select Committee on Indian Constitutional Reforms.

Nagai, Yusaburo. Japan is now second biggest rayon producer. Jour. Soc. Chem. Indus., Japan, Sup. Binding 36 (10): 533B-534B. Oct. 1933. (Published by Society of Chemical Industry, Japan, Yuraku Building, Marunouchi, Tokyo, Japan)

"Many spinning companies in this country are rushing into the manufacture of staple fibre. This new textile material, being one of the viscose products, may be called artificial wool or artificial cotton."

Niemeyer, A. The world textile industry on the upgrade. Textile Recorder 51 (607): 23-24. Oct. 15, 1933. (Published at 121 Deansgate, Manchester, England)

Pearse, A. S. The cotton industry of Japan, China and India and its effect on Lancashire. Internatl. Aff. 11 (5): 633-657. Sept. 1932. (Published by The Royal Institute of International Affairs, Chatham House, 10 St. James' Square, London, S. W. 1, England)

Address given at Chatham House on July 7th, 1932.

Rayon versus cotton. Silk Jour. and Rayon World 10 (113): 13. Oct. 20, 1933. (Published at 121 Deansgate, Manchester, England)

"In considering the question of the competition between rayon and cotton, one very great advantage in favour of the former must not be forgotten. Rayon is the only textile fibre the fluctuations in the price of which are not subject to conditions beyond the control of the producers. The prices of the other vegetable fibres are all subject to the vagaries of the weather; the degree of intensity of the ravages of the boll-weevil causes cotton to rise or fall."

Review of successful developments in rayon and cotton style fabrics. Careful selection of weaves suitable for women's apparel and avoidance of making cheap substitutes declared to be basis of rapid expansion. Rayon and Synthetic Yarn Jour. 14 (10): 18-19. Oct. 1933. (Published at 303 Fifth Ave., New York, N. Y.)

Russian market. Cotton Digest 6 (7): 6. Nov. 25, 1933. (Published at Cotton Exchange Building, Houston, Tex.)

"If Russian per capita cotton consumption should increase 100 percent during the next few years to 11.2 rounds, that is, to approximately half the per capita consumption in the United States, Russian annual cotton consumption would be about 3,600,000 bales as against an average of 1,800,000 in the past five years...While it will undoubtedly be a number of years before Russia is equipped to spin substantial imports of cotton over and above her own production of the staple, it is very probable that Russia will use more American cotton this year than for several years past, when her takings were almost negligible."

Smith, H. de W. The rayon industry. A quarter century of progress. Amer. Dyestuff Rptr. 22 (21): 610-613, charts. Oct. 9, 1933. (Published at 440 Fourth Ave., New York, N. Y.)

Presented at Saturday morning session, Annual convention of American Association of Textile Chemists and Colorists, Chicago, September 9, 1933.

The author describes the technical progress of the industry and mentions that "we have learned to produce rayon filaments which are stronger than the cotton fibers from which they are made."

Tebbutt, A. R. The behavior of consumption in business depression. Harvard Univ. Graduate School of Business Admn. Business Research Studies 3, 21p., tables. Boston, Mass., 1933.

Includes analysis of the consumption of clothing, 1928-1932, concluding that "The consumption of women's clothing in the aggregate is certainly no lower, and in all probability is greater, in the depression period of 1932 than in the prosperity period of 1928; that of men may be somewhat lower, but not markedly so. Of course, those articles of clothing that are characteristic of the luxury class have declined, as would normally be expected."

Thesmar, Alex. tr. World-spinning is shifting to Orient from Europe and west. Cotton Trade Jour. 13 (47): 3. Nov. 25, 1933. (Published at New Orleans, La.)

"Translated ... from Deutsche Bergwerks Zeitung."

Discusses post-war changes in the world

spinning industry. Includes figures taken from the official records of the "International Association of Cotton Spinners."

Whitworth, Herbert. Hours and wages in Japan. A reply to Mr. Matsudaira. Textile Mercury and Argus 89 (2324): 273. Sept. 29, 1933. (Published at 41 Spring Gardens, Manchester, England)

Who will help the consumer? India: Competitor and customer. Textile Mercury and Argus 89 (2328): 359, 363. Oct. 27, 1933. (Published at 41, Spring Gardens, Manchester, England.)

"By a Lancashire man in India."

The demand for cotton goods in India is considered as well as the output of Indian mills and Lancashire's relation to the situation.

Supply and Movement

Case, W. W. World cotton supply at new high record despite AAA program. Annalist 42 (1088): 677. Nov. 24, 1933. (Published by New York Times Co., New York, N. Y.)

Two tables and a chart accompany this article. Table 1 is entitled: World cotton production and consumption; table 2: United States cotton production. The period covered in table 2 is from 1920 to Nov. 1933. The chart shows cotton stocks and prices, 1920-1933.

Cotton production in Hupeh. Chinese Econ. Jour. 13 (4): 356-363. Oct. 1933. (Published by Bureau of Foreign Trade, Ministry of Industry, Customs Building, Shanghai, China)

Ecuador. Departamento de agricultura. Informe, 1932-1933. 195p., illus. 1933.
Campana del algodón (cotton campaign), p.155-158.

Garside, A. H. American cotton and its rivals. The problem of eliminating surplus supplies. Manchester Guardian Com. (Sup., World Textiles with a Review of American Cotton): 9-10. Oct. 7, 1933. (Published at the Guardian Building, Manchester, England)

Gt. Britain. Dept. of overseas trade. Economic and trade conditions in Australia to December, 1932. Report compiled by A. W. Burton. 160p., tables. London, H. M. Stationery off., 1933.
Cotton: p.65-66. "Table shows the progress made in cotton growing, which is carried on

in Queensland only, during the last ten years."

Himbury, Sir William. The progress & development of cotton-growing within the British Empire. Cotton [Manchester] 39 (1887): 21-22, table. Oct. 14, 1933. (Published at Ship Canal House, King St., Manchester 2, England)

Janssens, P. E. A. La canne à sucre et le coton au Vénézuéla. Agriculture et Elevage au Congo Belge 7 (12): 159-160. Nov. 1933. (Published at 34, Rue Stassart, Bruxelles, Belgium)
Sugar cane and cotton in Venezuela.

Matlock, R. L. Quality trend of cotton. Ariz. Prod. 12 (17): 10. Nov. 15, 1933. (Published at Phoenix, Ariz.)

Metzger, A. W. Mason county cotton better quality during 1933 season. Cotton Ginners Jour. 5 (2): 9-10. Nov. 1933. (Published at 109 North Race St., Dallas, Tex.)

The author, a ginner of Mason, Texas, comments on the Cotton Quality Reporting Service of the U. S. Department of Agriculture.

Nigeria. Dept. of agriculture. Cotton report for the half year ending March 31st, 1933. 9p., mimeogr., tables. Ibadan. 1933.

"There is a very fair prospect that the cotton breeder will be able to improve on Ishan A. I do not doubt that if ever the price of cotton rises slightly, cotton will again become a more important crop in Southern Nigeria than it has ever been before."

Pettet, Z. R. The farm horse. 84p., charts, tables. Washington, D. C., U. S. Dept. of commerce, Bureau of the census, 1933. (15th census, Agriculture)

The purpose of this monograph is "to trace the origin of the surpluses of crops and live stock, in so far as they are connected with decreases in the number of farm horses and mules, and to offer a few illustrations of the effect of such decrease on prices and farm purchasing power...The minimum figure of 18,000,000 acres released by the decrease in horses and mules between 1920 and 1930 is sufficient to produce yearly 6,000,000 bales of cotton, half the usual crop, or 250,000,000 bushels of wheat, about one

third of the wheat crop, or 487,000,000 bushels of corn, an amount sufficient to feed over 12,500,000 hogs a year." Effect of the decrease in the number of farm horses and mules on the cotton surplus is discussed at length.

Philippine Islands. Department of agriculture and natural resources. Annual report for the fiscal year ending December 31, 1931. 1176p., illus. 1932.

Cotton statistics, p.303-304.

Revere, C. T. Acreage reduction--and the cost. Less than 12,000,000 bales this season? Manchester Guardian Com. (Sup., World Textiles with a Review of American Cotton): 7,9, tables. Oct. 7, 1933. (Published at the Guardian Bldg., Manchester, England)

Outlook for the 1933 crop of American cotton.

South Africa. Office of census and statistics. Official year book of the Union of South Africa, 1931-32. 1080p. Pretoria, 1933.

Statistics of cotton production, etc., p.352-353, 410, 412, 561, 809.

Prices

Beck, A. Leitfaden für die berechnung des garnherstellungspreises in der baumwollspinnerei. Spinner und Weber 51 (45): 1-4, tables. Nov. 10, 1933. (Published at Gellertstrasse 7/8, Leipzig, Germany)

Guide for fixing yarn prices in cotton spinning mills.

Blalock, U. B. 10¢ loan is all right but 15¢ price is far better. N. C. Cotton Grower 12 (11): 1,2. Nov. 1933. (Published by the North Carolina Cotton Growers Co-operative Association, Raleigh, N.C.)

"According to late figures of the Department of Agriculture, it will take a price of 14.9 cents a pound for cotton to put us on a pre-war parity price basis."

Cotton co-operative parity price plan to increase farm purchasing power. Tex. Coop. News 13 (12): 2. Nov. 1, 1933. (Published at 1100 South Ervay St., Dallas, Tex.)

The plan is given in detail.

[Gull, E. M.] Silver and the cotton trade. Its

effect in eastern markets. Textile Weekly 12 (294): 204. Oct. 20, 1933. (Published at 49 Deansgate, Manchester, England)

Abstract of address at meeting of the British Association of Managers of Textile Works, Oct. 7, 1933.

Haskell, E. S. Stabilization operations of the Federal farm board. 48p., charts. New York, American council, Institute of Pacific relations, 1933.

Prepared for the Fifth Biennial Conference of the Institute of Pacific Relations to be held at Banff, Canada, August 14 to 28, 1933.

Cotton stabilization: p.22-34.

Loper, R. E. Textile costs under the NRA. Textile Bul. 45 (12): 6, 10. Nov. 23, 1933. (Published by Clark Publishing Co., 118 West Fourth St., Charlotte, N. C.)

Address at the annual meeting of the North Carolina Cotton Manufacturers' Association, Nov. 17, 1933, Pinehurst, N. C.

The increased cost of a broadcloth shirt is analyzed.

Slater, W. H. Waste losses and regain in costing. Exposing the fallacy of "another method." Textile Weekly 12 (294): 194, table. Oct. 20, 1933. (Published at 49 Deansgate, Manchester, England)

Further discussion of the subject treated in an article appearing in Textile Weekly, Oct. 6, 1933, p. 139.

Slater, W. H. Waste losses and regain in costing. The trade hits back. Textile Weekly 12 (296): 250-251, table. Nov. 3, 1933. (Published at 49 Deansgate, Manchester, England)

Includes criticisms of former articles which the author has received.

To restore cotton price parity. The American cotton co-operative association presents plan for restoring price of cotton to 1909-14 parity base. Farm and Ranch 52 (22): 9, 16. Nov. 15, 1933. (Published at 3306 Main St., Dallas, Tex.)

Todd, J. A. Comparative cotton prices, 1932-33. Empire Cotton Growing Rev. 10 (4): 294-299, tables. Oct. 1933. (Published by P. S. King and Son, Ltd., 14, Great Smith St., London, S. W. 1, England)

Marketing and Handling Methods and Practices

Price, T. H. The education of the speculator. Com. and Finance 22 (45): 968. Nov. 8, 1933. (Published by Theo. H. Price Publishing Corp., 95 Broad St., New York, N. Y.)

Introduction to a series of articles.

Services and Facilities

[British association of managers of textile works] Managers' visit to Liverpool. "A red letter day" even for the British association. Textile Weekly 12 (295): 225, 227. Oct. 27, 1933. (Published at 49 Deansgate, Manchester, England)

Describes the Liverpool Cotton Association and the Port of Liverpool.

Proctor, E. B. Cotton insurance. Methods of insuring from gin to mill. 7p. [n. p.] 1931.

[Texas cotton association] Complaint made on gin weights. Cotton Ginners Jour. 5 (2): 14. Nov. 1933. (Published at 109 North Race St., Dallas, Tex.)

Letter, signed by L. T. Murray, urges cooperation in an effort to have cotton bought and sold on correct weights.

Cooperation in Marketing

Firor, J. W. New cotton-marketing plan. Country Cent. 103 (12): 55. Dec. 1933. (Published at Independence Square, Philadelphia, Pa.)

Describes plan proposed for cotton cooperative marketing associations whereby farmers will be paid the market price for cotton when it is delivered and profits will be returned to them as patronage dividends.

UTILIZATION

Fiber, Yarn, and Fabric Quality

Ahmad, Nazir. Testing of Indian cottons for quality at the Technological laboratory. Indian Cent. Cotton Com. Technol. Lab. Technol. Bul. (ser. A) 25, 20p., tables. Bombay, 1933.

This "account of the methods employed at the Technological Laboratory for a determination of the fibre properties and the spinning value of Indian cottons applies strictly to only one phase of the activities of the Laboratory, viz., carrying out

of routine tests." - p.20.

Armstrong, G. M., and Bennett, C. C. Effect of soil fertility, boll-maturation period, and early or late production of bolls on the length of cotton fibers. Jour. Agr. Research [U. S.] 47 (7): 467-474, illus. Oct. 1, 1933. (Published by U. S. Department of Agriculture, Washington, D. C.)

Key No. S. C. - 8.

Technical Contribution No. 30 (new series) from the South Carolina Agricultural Experiment Station.

"Small plants, growing on plots of low fertility, and clearly suffering from malnutrition, produced lint of practically the same length as that produced by vigorous plants growing on plots of high fertility, though the uniformity of distribution of the different lengths was less in the poorly nourished plants." - Summary, p.474.

Armstrong, G. M., and Bennett, C. C. Some factors influencing the variability in length of cotton fibers on individual plants as shown by the sorter method. Jour. Agr. Research [U.S.] 47 (7): 447-466, illus. Oct. 1, 1933. (Published by the U. S. Department of Agriculture, Washington, D. C.)

Key No. S. C. - 7.

Technical Contribution No.26 (new series) from the South Carolina Agricultural Experiment Station.

Literature cited: p.465-466.

"Cotton fibers from all bolls on individual plants have been arrayed by the use of Baer and Johannsen sorters which allow an accurate separation of the different lengths into groups by weight...Studies have been made of halo length, seed-surface area and volume, boll volume, number of fibers per seed after 25 days of seed development, unit-fiber weight, and sorter distribution of fibers in bolls at approximately 4-day intervals from 25 to 50 days of age." - Summary, p.464-465.

Astbury, W. T. The X-ray interpretation of fibre structure. Jour. Soc. Dyers and Colourists 49 (6): 168-180, illus. June 1933. (Published by Chorley & Pickersgill Ltd., Printers, Leeds, England)

Paper presented at meeting of the Society of Dyers and Colourists, England, Jan. 17, 1933.

"The X-ray investigation of fibre structure is described, and it is shown how the molecules of textile fibres are aggregated into crystalline or pseudo-crystalline groups. Fibre photographs are given of stretched and unstretched rubber, ramie, mercerised cellulose, cotton fibres, silk, and wool, and the differences in structure between them are explained." - Jour. Textile Inst.

24(9): A469. Sept. 1933.

Atsuki, Katsumoto, and Ishiwara, Masanori. The structure of cellulose gel. VII. The X-ray study of cellulose nitrate gel. Jour. Soc. Chem. Indus., Japan, Sup. Binding 36(10): 540B-544B, illus. Oct. 1933. (Published by Society of Chemical Industry, Japan, Uraku Building, Marunouchi, Tokyo, Japan)

Balls, W. L. To improve Egyptian cotton. Spinning experiments on test plant. Manchester Guardian Com. 27(699): 385. Nov. 11, 1933. (Published at the Guardian Building, Manchester, England)

Describes building and program of work of the Cotton Research Board spinning-test station recently established at Giza under the Botanical section of the Egyptian Ministry of Agriculture. H. A. Hancock has been appointed Chief of the work.

Berl, E., and Rueff, G. Ueber die bei der nitrierung von cellulose mit verschiedenen mischsäurearten entstehenden nitrate aus nativer und hydratcellulose. Cellulosechemie 14(7): 100-102, illus. July 2, 1933. (Published by Otto Elsner Verlagsgesellschaft m.b.H., Oranienstrasse 140-142, Berlin S 42, Germany)

"The relative concentrations of mixtures of phosphoric acid-nitric acid-water and sulphuric acid-water necessary to mercerise natural cellulose are expressed in curves as triangular coordinate systems. Transition ranges are present each side of the curves in which both cellulose modifications are present. The mercerisation effect is conditioned largely by the water content of the acid mixture whilst, in addition, sulphuric acid restricts the lattice rearrangement more than phosphoric acid."-Jour. Textile Inst. 24(10): A515. Oct. 1933.

Farr, W. K. Fiber abnormalities and pressure variations within the boll in Gossypium. Amer. Jour. Bot. 19(10): 839. Dec. 1932. (Published by the Brooklyn Botanic Garden, at Prince and Lemon Sts., Lancaster, Pa.)

Abstract of paper presented before the Physiological section of the Botanical Society of America, Atlantic City, N. J., Dec. 28-30, 1932.

Fort, M. Qualitative tests to distinguish between oxycellulose and hydrocellulose. Jour. Soc. Chem. and Indus. 52 (23): 487. June 9, 1933. (Published at Central House, 46, Finsbury Sq., London, E.C. 2, England)

"The author reaffirms the validity of his 'heat test' for distinguishing oxycellulose and hydrocellulose which was recently criticised by Thomas. He states that Thomas's own test with Turnbull's blue needs sympathetic precautions before the claimed results are obtained, and suggests that Thomas may have overheated or insufficiently purified the ingredients used in the heat test, and that this accounts for its failure."-Jour. Textile Inst. 24 (9): A477. Sept. 1933.

Franke, Heinz. Die erzeugung von seidengriff und seidenglanz oder leinenartigem aussehen auf baumwolle. Zeitschrift für die Gesamte Textil-Industrie 36 (13): 169. Mar. 29, 1933. (Published at Verlag L. A. Klepzig, Leipzig C 1, Germany)

"A silk-like lustre and increases in strength of 66% (dry) or 60% (wet) can be imparted to cotton fabrics by passing in a stretched state for $\frac{1}{2}$ -5 mins. through a 100% solution of crystallised sodium sulphide at 115°, rinsing, souring, and drying. Improved lustre is produced by treatment with very dilute alkali and acid, the best results being obtained with 0.1 N sodium hydroxide for half an hour at 50° and souring with 0.15% lactic acid. The appearance of long-fibred linen can be produced by treatment with sodium hydroxide of at least 19° Bé and then with cuprammonium hydroxide solution; drying between the two operations is advantageous. - Jour. Textile Inst. 24 (9): A460. Sept. 1933.

Gordon, H. B. A machine for determining the breaking strength of individual textile fibers. Mel-liand Textile Mo. 5 (8): 244-245, illus. Nov. 1933. (Published at 305 Washington St., Brooklyn, N. Y.)

Grassmann, W., Zechmeister, L., Tóch, G., and Stadler, R. Über den enzymatischen abbau der cellulose und ihrer spaltprodukte. Liebigs Annalen der Chemie 503 (1): 167-179, tables. May 29, 1933. (Published at Verlag Chemie, G. m.b.H., Berlin, Germany)

"Three series of experiments on cellulose and its ferments are described. The first is to compare an animal cellulose (tunicin) with cotton cellulose. Both are attacked by the enzyme from Aspergillus oryzae, and the dextrin produced from the tunicin is identical with a cello-dextrin from cotton. No difference therefore exists between the behaviour of plant and animal celluloses in this respect. The second series

the action on various media of the cellulose enzyme from Aspergillus with that of emulsin...The two ferments have very different actions on the media, and are not identical. Finally it is shown that cellobiase and cellulase may be separated by adsorption with aluminium metahydroxide, diaspore, or bauxite...The authors conclude that the effectiveness or otherwise of the ferments is not only conditioned by the presence of certain reacting groups of atoms in the substratum, but is also affected by the position of the point of attack in the molecule and by the length of the chain."- Jour. Textile Inst. 24 (9): A480. Sept. 1933.

Griffith, M. E., and Siegert, Dorothy M. A study of some white English broadcloth shirts. Ohio Agr. Expt. Sta. Bimo. Bul. 18 (164): 130-132, tables. Sept.-Oct. 1933. (Published at Wooster, Ohio)

"The results of this study indicate that there is some correlation between price and quality. This holds true especially in the very highest priced and the very lowest priced shirts. There was not such a definite relationship shown by shirts in the group costing from one to two dollars. In this study Shirts E and F, costing \$2.50 and \$3.50, respectively, and Shirt A, costing \$0.48, showed the highest correlation between price and quality. This was adjudged by the strength-weight factor of the new and of the worn and laundered shirts, the premanency of the luster, the cut and style of the shirt, and the standards of construction."-Summary, p.132.

Grünsteidl, E. Eine neue methode für die unterscheidung von leinen und baumwollgeweben. Faserforschung 10(3): 215-217, illus. 1933. (Published by S.Hirzel, Koenigstrasse 2, Leipzig C 1, Germany)

A new method for distinguishing linen and cotton cloth.

Hess, K., and Trogus, C. Bemerkungen zur arbeit von W. Schramek: "Das röntgenfaserdiagramm als quantitative masstab für die veränderung der bausteine der cellulosefaser durch chemische prozesse." Zeitschrift für die Physikalische Chemie (b) 21(4): 349-352. May 1933. (Published at Akademische Verlagsgesellschaft m.b.h., Leipzig, Germany)

Criticism of a work by W. Schramek: "The X-ray fiber diagram as quantitative measure for the variation of structure of cellulose fiber through chemical processes."

Noted in Jour. Textile Inst. 24(9): A477. Sept. 1933; and in Chem. Abs. 27(16): 4073. Aug. 20, 1933.

Kratky. O. Zum deformationsmechanismus der faserstoffe, I. Kolloid Zeitschrift 64(2): 213-222, illus. Aug. 1933. (Published by Theodor Steinkopf, Dresden and Leipzig, Germany)

The deformation mechanism of fibrous materials. "The characteristic difference between many high molecular materials and other organic substances is their ability to form plastic films. In the present and subsequent papers of the series the deformation of such films and the phenomena allied thereto is utilised for investigation of the micellar structure of fibres. In the present paper an ideal model is suggested for a strongly swollen cellulose film, which is essentially a structure consisting of elongated rods or micelles which slip upon one another with an amorphous medium in between them which acts as the swelling agent. From statistics the length of the micelles is calculated for simple stretching along their length, and the effects in two directions at right angles, i.e. along the length and across the fibril, are deduced." -Jour. Textile Inst. 24 (9): A483. Sept. 1933.

Lipowsky, E. Prüfmethode im vorwerk, vor- und feinspinnerei. Spinner und Weber 51(44): 1-4, illus. Nov. 3, 1933. (Published at Gellertstrasse 7/9, Leipzig, Germany)

Test methods in the preliminary work, preparatory and spinning processes.

"Manager". Are "rule of thumb" methods of ascertaining cotton quality out of date? Textile Mercury and Argus 89(2328): 363, illus. Oct. 27, 1933. (Published at 41, Spring Gardens, Manchester, England)

Discusses the Baer test.

Mease, R. T. Adsorption of alcohol by fibrous materials. Indus. and Engin. Chem. (Analyt. ed.) 5(5): 317. Sept. 15, 1933. (Published at Room 706, Mills Building, Washington, D. C.)

"The purpose of this note is to call attention to the fact that fibrous materials in the form of paper extraction thimbles, cotton, wool, silk, and rayon adsorb alcohol and hold an appreciable amount of it, even when dried to constant weight at temperatures considerably above the boiling point of alcohol."

Mechels, Otto, and Stöhmer, Georg. Die veränderung der garnnummer bei der mercerisation. Melliand Textilberichte 14(9): 463-464, illus. Sept. 1933. (Published at Heidelberg, Germany)

Variation of the yarn number by mercerization.

Neal, S.M. Recent investigations into the behaviour of direct cotton dyes. Jour. Soc. Dyers and Colourists 49(7): 216-218. July 1933. (Published by Chorley & Pickersgill Ltd., Printers, Leeds, England)

Summary of paper read at meeting of the Society of Dyers and Colourists (England) at Manchester, Dec. 16, 1932.

Pearson, Norma L. Neps and similar imperfections in cotton. U. S. Dept. Agr. Tech. Bul. 396, 19p., illus. Washington, Govt. print. off., 1933.

"Most of the small imperfections found in the materials studied may be divided into two groups: Neps proper and fragments of seed coat.

"Neps proper consist only of tangled fibers; 15 kinds of neps are differentiated according to the type or types of fibres entering into the composition of individual neps, the fibers being classified for the purpose of this study, as; (1) Thick-walled fibers, (2) medium-walled fibers, (3) thin-walled fibers, and (4) fuzz fibers.

"Seed-coat fragments are of two kinds: Fragments of mature seeds resulting, in the main, from the pulling off of the chalazal end of the seed during ginning and fragments of motes crushed during ginning."-Summary and Conclusions, p.16.

Pickard, R.H. The British Cotton industry research association. The work of the Shirley institute, Didsbury, Manchester. Cotton [Manchester] 39(1887) 15. Oct. 14, 1933. (Published at Ship Canal House, King St., Manchester 2, England)

Includes description of a "small testing machine, called the 'Shirley Analyser for Raw Cotton or Waste', which has recently been put on the market; as its name indicates, this machine analyses a sample of raw cotton or waste into two factions--good cotton and trash, the percentage of each of which present in the sample can thus be readily determined."

Pope, O. A. The calculation of certain fiber length constants in cotton. Amer. Soc. Agron. Jour. 25

(11): 740-756. illus. Nov. 1933. (Published at Geneva, N.Y.)

Progress in research reported at annual meeting of U.S. Institute. Textile World 83(12): 1981. Nov. 1933. (Published at 330 West 42d St., New York, N.Y.)

Report of annual meeting of the U.S. Institute for Textile Research held in New York, Nov. 2, 1933.

"Work which is being done by fellows of the Textile Foundation and other investigators...includes studies on the structure of fibers, durability of fabrics, mercerizing of cotton, cause of wool felting, and development of new research apparatus."

Also in Textile Bul. 45(11): 8. Nov. 16, 1933.

Reynolds, E. B., and Killough, D. T. The effect of fertilizers and rainfall on the length of cotton fiber. Amer. Soc. Agron. Jour. 25 (11): 756-764. Nov. 1933. (Published at Geneva, N.Y.)

"When the average results for the 3 years on the Lufkin fine sandy loam soil are considered, there did not appear to be any significant correlation between the percentage of nitrogen, phosphoric acid, or potash and the length of cotton fiber..."

"The length of fiber at College Station was positively correlated with the amount of rainfall during the time the bolls were developing in 2 of the 3 years of the experiment. There was, however, no correlation apparent between the rainfall and the length of fiber during the 1 year of the work at Troup."

Schiefer, H. F., Cleveland, R. S., Porter, J. W., and Miller, Joshua. Effect of weave on the properties of cloth. U.S. Dept. Com., Bur. Standards, Jour. Research 11(4): 441-451, illus. Oct. 1933. (Published at Washington, D. C.)

Research Paper RP600.

"The effect of the weave on the strength, elongation, take-up, tear resistance, fabric assistance, and air permeability of cloth is discussed in this paper. For this purpose a series of 42 cloths were woven from the same cotton yarns in weaves, comprising plain, twill, rib, mock leno, basket, sateen, and various combinations of these weaves. The factors which contribute to strength and tear resistance are enumerated and discussed.

"Four cloths having high tear resistance were

woven for experiments on rubberizing and on doping. The results of these experiments are given and compared with the properties of the gas cell cloth and outer cover cloth which are used in dirigible construction."-Abstract.

Scott, W. M. A comparison of methods for the determination of small amounts of copper in textiles. Amer. Dyestuff Rptr. 22(21): 605-610, tables. Oct. 9, 1933. (Published at 440 Fourth Ave., New York, N. Y.)

Bibliography: p.609-610.

Presented at Saturday morning session, Annual convention of American Association of Textile Chemists and Colorists, Chicago, September 9, 1933.

Sisson, W. A., and Clark, G. L. X-ray method for quantitative comparison of crystallite orientation in cellulose fibers. Indus. and Engin. Chem. (Analyt. ed.)5(5): 296-300, illus. Sept. 15, 1933. (Published at Room 706, Mills Building, Washington, D. C.)

Literature cited: p.300.

Presented before the Division of Cellulose Chemistry at the 85th meeting of the American Chemical Society, Washington, D. C., March 26-31, 1933.

"The relation between orientation of the crystallites or micelles and various properties of cellulose fibers is pointed out and an x-ray method for quantitatively comparing the orientation is described. The method is based upon the assumption that the distribution of the crystallites around the pencil of x-rays is proportional to the distribution of intensity around the 002 diffraction ring. Intensity measurements are made with a microdensitometer equipped with a rotating slope.

"The distribution of the crystallites is calculated from the intensity values and the orientation is expressed by distribution curves which may be differentiated from one another by statistical methods. The data obtained may be used to study the structure of the fiber or to predict physical and chemical properties which are anisotropic. Typical data for three grades of cotton are presented to show the sensitiveness of the method."

Sobue, Horoshi. On the hydromechanics of viscose and the mechanism coagulation of viscose in the spinning process. Jour. Soc. Chem. Indus.,

Japan, Sup. Binding 36(5): 268B-275B, illus. May 1933. (Published by Society of Chemical Industry, Japan, Yuraku Building, Marunouchi, Tokyo, Japan)

"The author derives a theoretical equation representing in all cases the relation between the flow time, the coefficient of viscosity, and the applied pressure in the Ostwald viscometer. Experiments are also described on the change of flow velocity by spinning pressure, from which an equation of flow velocity is derived."-Jour. Textile Inst. 24(9): A439. Sept. 1933.

The study of cotton and yarns. Scientific characters to help practical men. Textile Weekly 12 (296): 249, 251, illus. Nov. 3, 1933. (Published at 49 Deansgate, Manchester, England)

To be continued.

Mentions scientific tests of use to mills.

Toenniessen, Ernst. Nachtrag zum aufsatz "über den einfluss der klemmpunktentfernung von streckenwerken auf die festigkeit und gleichmässigkeit von gespinsten." Melliand Textilberichte 14(9): 437-438, illus. Sept. 1933. (Published at Heidelberg, Germany)

Addition to the discussion "Concerning the effect of the nipping-point-distance of the drawing frame on the strength and uniformity of yarn."

Turner, A. J., and Venkataraman, V. The foundations of yarn-strength and yarn-extension. Part V. The prediction of the spinning value of a cotton from its fibre-properties. Indian Cent. Cotton Com. Technol. Lab. Technol. Bul. (ser.B) 17, 48p., tables, charts. Bombay, India. 1933.

"The accuracy of the prediction formulae has been tested by comparing the actual spinning values with those calculated from the fibre-properties by the aid of the formulae. Using the prediction formula based on fibre-length alone, the difference between actual and predicted spinning values is not greater than 20% in 69% of the cases; the corresponding percentages of cases for other prediction formulae are 53% for fibre-weight alone, 76% for fibre-length and fibre-weight together, with no better results when either fibre-strength or ribbon-width is also included; and only 80% when all six properties are included. As the prediction-formula based on six fibre-properties is thus hardly any more accurate than the predict-

tion-formula based on only the two properties of fibre-length and fibre-weight, it is concluded that the greater labour entailed in determining either the ribbon-width, strength, convolutions, or rigidity, is not worth while except for some special reason."-Summary, p.1.

Technology of Manufacture

Beede, H. G. Large package ring spinning and twisting. *Whitin Rev.* 1(2): 1-5, illus. July 1933. (Published by Whitin Machine Works, Whitinsville, Mass.)

To be continued.

Cotton thread. Servant of a multitude of trades. *Manchester Guardian Com.* (Sup., *World Textiles with a Review of American Cotton*): 25. Oct. 7, 1933. (Published at the Guardian Building, Manchester, England)

Brief description of thread manufacture and marketing.

Dust in cardrooms. Automatic disposal of trash from the card. *Textile Weekly* 12(297): 278, 279, illus. Nov. 10, 1933. (Published at 49 Deansgate, Manchester, England)

[Emmons loom harness company] Labor's share in cost of cotton goods production. *Textile Bul.* 45(11): 6, 24-25. Nov. 16, 1933. (Published by Clark Publishing Co., 118 West Fourth St., Charlotte, N. C.)

Extracts from pamphlet, "What is labor worth."

It is estimated that labor receives 51.8 per cent of the value added by manufacrure."

Hanton, W. A. New machinery for cotton, silk, and rayon. Large package spinning. *Manchester Guardian Com.* (Sup., *World Textiles with Review of American Cotton*): 26-27, illus. Oct. 7, 1933. (Published at the Guardian Building, Manchester, England)

How to check the productive efficiency of a modern spinning mill. Time lost through excessive changing. *Textile Mercury and Argus* 89 (2325): 297, x. Oct. 6, 1933. (Published at 41 Spring Gardens, Manchester, England)

White, Richard. Mechanical faults encountered in cotton-loom tests. *Textile World* 83(12): 1932. Nov. 1933. (Published at 330 West 42d St., New York, N. Y.)

Technology of Consumption

American society for testing materials. Committee D-13. Report...on textile materials. 6Op. Philadelphia, Pa., 1933.

Preprint of report to be presented at the thirty-sixth annual meeting of the American Society for Testing Materials, Chicago, Ill., June 26-30, 1933.

The report includes recommendations affecting standards for textile materials; proposed revisions in standards, tolerances, and test methods and proposed tentative definitions and terms relating to textile materials.

Cotton fabric reinforcement of road surfacing. Roads and Streets 76(6): 235, illus. June 1933. (Published by Gillette Publishing Co., 400 W. Madison St., Chicago, Ill.)

Describes method used in surfacing a "stretch of road extending for $2\frac{1}{2}$ miles near Baton Rouge," La.

Lancashire's part in the evolution of rubber tyre and belting manufacture. An application outside the textile field. Textile Mercury and Argus 89(2327): 343. Oct. 20, 1933. (Published at 41, Spring Gardens, Manchester, England)

Summaries of two papers "read at a joint meeting of the Lancashire Section of the Textile Institute and the Manchester and District Section of the Institution of the Rubber Industry in the College of Technology, Manchester" on Oct. 16, 1933. "Cotton as a raw material for the rubber industry was first considered by Mr. W. H. Reece...chief chemist of the Leyland and Birmingham Rubber Company, and in a paper which followed, Mr. Fletcher Chadwick..of the Preston Tyre Manufacturing Company Ltd., dealt with the manufacture of cotton fabrics for the rubber industry--from a cotton man's point of view."

Peck, A. P. A raw material of many uses. Whole groups of new products, and new methods of making old products better, are being built around purified cellulose. Sci. Amer. 149(6): 256, illus. Dec. 1933. (Published at 24 West 40th St., New York, N. Y.)

"Alpha cellulose, the technical name that has been applied to cellulose of more than 92 percent purity, is now commercially available under the generic name of solka. Already the influence of this new raw material is being felt in such widely separated fields as the shoe trade ,the

manufacture of roofing, paper making in all its branches, the weaving art, and the production of molded plastics."

"The principal source of supply for the producer of highly purified cellulose is spruce wood although in the laboratory the same material may be obtained from any vegetable matter."

Rapp, W. M., and Weir, P. L. Cotton caulking yarn. Jour. Amer. Water Works Assoc. (Southeast. Sect.) 3(1): 92-96, table. 1933. (Published at 522-3 Massey Building, Birmingham, Ala.)

Paper read at fifth annual meeting of the Southeastern Section of the American Water Works Association at Albany, Ga., 1933.

Discussion: p.96-98.

Includes table giving coli-aerogenes count and sterilization costs on caulking yarns (jute and cotton). "The cotton caulking yarn is not only free from pathogenic bacteria, but also offers greater hydraulic possibilities in the joint than the braided or unbraided jute."

U. S. Dept. of agriculture. Bureau of home economics. Report of the chief...1933. 13p. Washington, Govt. print. off., 1933.

Textiles and clothing: p.10-13. Mentions cotton-fabrics study and cotton-fabric finishing.

SEED AND SEED PRODUCTS

American institute of home-grown fats and oils. New oils and fats promotional organization... Miss Lois P. Dowdle elected director of operations. Cotton Oil Press 17(7): 11-12. Nov. 1933. (Published at Cotton Exchange Building, Memphis, Tenn.)

Aspegren, H. Some remarks illustrating the importance of knowing the structure of oil and fat triglycerides. Oil and Soap 10(5): 91-92, chart, table. May 1933. (Published by Gillette Publishing Co., 400 W. Madison St., Chicago, Ill.)

Table gives analysis of cottonseed oils.

Carpenter, E. L. Cleaning of cottonseed. Cotton and Cotton Oil News 34(44): 3-4, 12-13. Nov. 4, 1933. (Published at P.O. Box 444, Dallas, Tex.)

Describes some of the common cleaning equipment layouts that might be adopted.

Facts, figures and a few findings. Oil Miller and Cotton Ginner 43(3): 3-4, tables. Nov. 1933. (Published at 161 Spring St., N. W., Atlanta, Ga.)

The author discusses the percentage of seed produced that should be available for crushing by oil mills.

Fash, R. H. Cooking cottonseed meats containing high moisture. Oil and Soap 10(7): 125-126. July 1933. (Published by Gillette Publishing Co., 400 W. Madison St., Chicago, Ill.)

Haines, E. S. Program to increase cottonseed prices. Cotton and Cotton Oil News 34(45): 3,9. Nov. 11, 1933. (Published at P. O. Box 444, Dallas, Tex.)

The author suggests three things that should be done at once: "I. The Secretary of Agriculture should require that margarine, shortening, cooling oils and salad oils be made only of domestic oils... II. The Federal Relief Administrator should purchase at least 200,000,000 pounds of cottonseed oil foods... III. The proposed compensatory tax on cottonseed oil should be opposed."

Halverson, J. O., and Smith, F. H. Relation of moisture to extraction of gossypol from cottonseed meal with ether. Indus. and Engin. Chem. (Analyt. ed.) 5(5): 320-322, tables. Sept. 15, 1933. (Published at Room 706, Mills Building, Washington, D. C.)

Published with the approval of the Director of the North Carolina Agricultural Experiment Station as Paper 69 of the Journal Series.

Presented before the Division of Biological Chemistry at the 85th meeting of the American Chemical Society, Washington, D. C., March 26-31, 1933.

"Isolated gossypol is readily soluble in anhydrous or ordinary ethyl ether. However, anhydrous ether extracts little or no gossypol from dried or air-dry cottonseed meal, whether the meal be dried or without heat. Moisture is the important factor in extracting gossypol from cottonseed meal with ether, the highest yields occurring when the charge of meal contains about 20 percent of water and when water is also added to the ether in the receiving flask. Meals so treated have yielded from twice to ten times more gossypol than the same samples of air-dry meal."

Hoffman, G. How and why we burn cotton-seed hulls. Power 77(9): 462-463, diagr. Sept. 1933. (Published at 330 West 42d St., New York, N. Y.)

"Hulls from the cotton-seed oil industry are ordinarily used as cattle feed and fertilizer, but prices in these markets recently have been so low that it has become economically sound to use hulls as fuel, displacing coal, fuel oil and gas even in localities where these fuels are comparatively cheap."

Holton, J. C. Foreign oils exclusion argument. Cotton Oil Press 17(7): 15-16. Nov. 1933. (Published at Cotton Exchange Building, Memphis, Tenn.)

Radio address, October 6, 1933.

Urges that importation from the Philippines of vegetable oils competing with cottonseed oil be stopped.

Holton, J. C. Why cottonseed prices are so low. A radio address. Cotton and Cotton Oil News 34(46): 3-4. Nov. 19, 1933. (Published at 3116-18 Commerce St., Dallas, Tex.)

The author urges restriction of imports of competing oils.

Also in Amer. Ginner and Cotton Oil Miller 11(3): 3-4. Nov. 1933.

Oil mill spread. Oil Miller and Cotton Ginner 43(3): 5, table. Nov. 1933. (Published at 161 Spring St., N. W., Atlanta, Ga.)

The table shows the spread between the price received by the farmer for cottonseed and the value of the products of cottonseed, 1916/17-1929/30.

Royce, H. D., and Lindsey, F. A., jr. Gossypol in the technology of cottonseed oil. Indus. and Engin. Chem. 25(9): 1047-1050, illus. Sept. 1933. (Published at Room 706, Mills Building, Washington, D. C.)

"Gossypol is a unique polyhydroxy phenolic compound which apparently occurs only in plants of the cotton family (Gossypium). Since cottonseed may contain as much as 0.6 percent of this reactive substance, some of the irregularities encountered in processing cottonseed oil have a definite relationship to the gossypol content."

Smith, F. H., and Halverson, J. O. Estimation of total and bound (D) gossypol in cottonseed meal. A modified method. Indus. and Engin. Chem. (Analyt. ed) 5(5): 319-320. Sept. 15, 1933. (Pub-

lished at Room 706, Mills Building, Washington, D. C.)

Published with the approval of the Director of the North Carolina Agricultural Experiment Station as Paper 71 of the Journal Series.

Woolrich, W. R., and Carpenter, E. L. Factors and problems in conditioning ,cooking and pressing cottonseed meats. Oil Miller and Cotton Ginner 43(3): 12-14. Nov. 1933. (Published at 161 Spring St., N. W., Atlanta, Ga.)

LEGISLATION, REGULATION, AND ADJUDICATION

Carded yarn mills plan additions to code. Textile Bul.45(11): 15. Nov. 16, 1933. (Published by Clark Publishing Co., 118 West Fourth St., Charlotte, N. C.)

Definitions of "spinning mill", "selling agent," "Commission," "broker," and "purchaser" are included in the additions recommended.

India. Legislature. The cotton textile industry protection (second amendment) act, 1933. Indian Trade Jour.111(1424): 10. Oct. 15, 1933. (Published by Department of Commercial Intelligence and Statistics, Calcutta, India)

Text of act extending the act of 1930 to March 1934.

Libaire, George. Gastonia: outpost of recovery? New Repub. 76(984): 233-235. Oct. 11, 1933. (Published at 421 West 21st St., New York, N.Y.)

Describes, from the point of view of labor, the results of two months under the N.R.A. in the "cotton-spinning capital of the United States," Gastonia, N. C.

Marketing agreement. Cotton Digest 6(7): 11-12. Nov. 25, 1933. (Published at Cotton Exchange Building, Houston, Tex.)

Summary of tentative marketing agreement for cotton ginner, formulated under the United States Agricultural Adjustment Administration.

Also in Cotton and Cotton Oil News 34(47): 3,5-7,14, 16-18. Nov. 25, 1933.

Rental payments provided for 1934 cotton program. Farm and Ranch 52(22): 16. Nov. 15, 1933. (Published at 3306 Main St., Dallas, Tex.)

Rules for dime loan papers are issued by "C.C.C." to stop errors. Cotton Trade Jour. 13(47): 3. Nov. 25, 1933. (Published at New Orleans, La.)

Lists "instructions for the preparation of notes and other documents in connection with producers' loans on 1933 cotton" issued by the Commodity Credit Corporation.

[Sloan, G. A.] Sees limited hours as cornerstone of textile code. Textile Bul.45(11): 12,16,24. Nov. 16, 1933. (Published by Clark Publishing Co., 118 West Fourth St., Charlotte, N. C.)

Extracts of address before the annual meeting of the Academy of Political Science in New York.

U. S. Dept. of agriculture. Agricultural adjustment administration. The agricultural adjustment act and its operation...October 1933. 13p. Washington, D. C., Govt. print. off., 1933.

Includes a description of the cotton-option plan and of the cotton-adjustment program, p.7-8.

U. S. Dept. of agriculture. Bureau of agricultural economics. World trade barriers in relation to American agriculture. Letter from the Secretary of agriculture transmitting in response to Senate resolution no. 280, seventy-second congress, first session, submitted by Senator Norbeck, a report pertaining to restrictions upon international trade in major agricultural products throughout the world, measures undertaken in several countries to protect the position of their farm producers, and the effects of these restrictions and measures upon prices of farm products and the welfare of American farmers...June 7, 1933. 540p. Washington, D. C., Govt. print. off., 1933. (73d Cong. 1st sess. Senate. Doc. 70)

"Prepared by the Bureau of Agricultural Economics" Chap.XII. Cotton: p.242-255.

U. S. Dept. of agriculture. Office of the solicitor. Report of the solicitor, 1933. 22p., tables. Washington, D. C., Govt. print. off., 1933.

Items concerning the United States Cotton Futures Act, and the United States Cotton Standards Act are given, p.20-21.

MISCELLANEOUS--GENERAL

[American society for testing materials. Committee D-13] D-13 on twist... Definition clarified and other matters accomplished. Textile World 83(12): 1990. Nov.1933. (Published at 330 West 42d St., New York, N. Y.)

Report of meeting at Providence, R.I., Oct.19-20,

1933. The following addresses are noted: Strain measurements of the band ply of an inflated, loaded pneumatic tire, by H. W. Brookwater; Improved method for converting observed skein strength to that for specified count, by M. E. Campbell; address by B. M. Jones on "the rule of thumb methods used in growing, preparing, grading and marketing cotton with reference to points of superiority in handling some foreign cottons as against American practice."

Congrès national des textiles végétaux, Paris, 1931.
Congrès national des textiles végétaux, 24-25 juin 1931, organise par l'Association cotonnière coloniale. 213p. Paris, Quinzaine nationale de la production agricole d'outre-mer [1931] ([Quinzaine nationale de la production agricole d'outre-mer. Collection] VI)

National congress of vegetable textile fibres, 24-25 June 1931, organized by the Colonial Cotton Association.

[Empire cotton growing corporation] Ten years. Empire Cotton Growing Rev.10(4): 255-267. Oct. 1933. (Published by P. S. King and Son, Ltd., 14, Great Smith St., London, S.W.1, England)

A survey of the work of the Empire Cotton Growing Corporation. Table shows crops produced by the Corporation in each country, 1920-1932. Lists of articles from the Empire Cotton Growing Review are given, classified by phases of the subject.

Lemert, B.F. The cotton textile industry of the Southern Appalachian Piedmont. 188p., illus. Chapel Hill, University of North Carolina press, 1933.

The author discusses the geographical influences of location, influences in the history of development, analysis of locational advantages, trend toward larger factories and mergers, factors influencing centralization, changes in textile manufacturing, and compares costs of production of cotton goods in New England and in the Piedmont.

U. S. Dept. of agriculture. Bureau of agricultural engineering. Report of the chief...1933. 22p. Washington, D. C., Govt. print. off., 1933.

Cotton-production machinery: p.15. Pink-boll-worm control: p.16. Cotton-ginning investigations: p.18.